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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,141	01/16/2004	Brian Farnworth	FA/243A	7216
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/760,141

Applicant(s)

FARNWORTH, BRIAN

Examiner

ANISH DESAI

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/24/08
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 1-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 11/24/08 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/24/08 has been entered.
2. In view of Applicant's amendment and arguments, and after reviewing the prior art as a whole, all of the previously made art rejections are withdrawn.
3. A new 35 USC Section 103(a) rejections based on Garbuio (US 3,925,916) in view of Smith et al. (US 5,877,100) is made.
4. A new 35 USC Section 112-second paragraph rejection is made in view of newly amended claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 36 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 36 depends from claim 27, which requires that the insulating structure be inserted into the toe cap area of the boot. However, claim 27 requires that the insulating structure is shaped in the form of a toe cap. Therefore, it is not clear as to whether the insulating structure is a material inserted into the toe cap or a toe cap itself. The same token is applied to claim 37.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 27-32 and 36-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garbuio (US 3,925,916) in view of Smith et al. (US 5,877,100).
8. Regarding claim 27, for convenience Table 1 as set forth below shows citation of pertinent portions of Garbuio and Smith where the steps of Applicant's claimed invention are disclosed or rendered obvious.

Step	Process limitation	Garbuio	Smith
1	Providing a boot having ... and a boot sole	abstract and column 1 lines 14-15	
2	Providing a mixture comprising a porous ... and aerogel		column 1 lines 58-66, column 4 lines 64-67, and column 6 lines 7-16
3	Compressing the mixture ... a structure material		column 11 lines 54-65
4	Placing the structure material in a gas impermeable envelope		column 11 lines 64-65
5	Evacuating air from the envelope ... form a flat insulating structure		column 1 lines 25-30, column 13 lines 1-6, and column 12 lines 30-36
6	Shaping the flat insulating ... foot of a wearer	general disclosure of Garbuio	column 11 lines 5-10
7	Inserting the shaped insulating structure ... of the boot	general disclosure of Garbuio	general disclosure of Smith

9. With respect to Applicant's method of insulating a boot comprising a step 1 (providing a boot having...and a boot sole), Garbuio discloses a flexible insert for a boot comprising a form-fitting liner with a core of elastomeric sheet material, wherein at least part of the core is an open-celled foam polymer in an air-impervious envelope, preferably of heat-sealable plastic (abstract). Further, Garbuio discloses that the insert liner of his invention serves as a thermal insulator (column 1 lines 15-17).

10. As to Applicant's claimed process steps 2-5, it is noted that Garbuio does not explicitly disclose said process steps 2-5.

11. However, Smith discloses insulation bodies such as vacuum panel (column 1, lines 5-7 and lines 21-23) that have improved thermal conductivities (column 1, lines 59-60).

12. As to Applicant's claimed step 2 (providing a mixture comprising...aerogel), it is noted that the insulation body of Smith comprises a particulate composition such as

aerogels, xerogels, metal oxide gels (e.g. silica and alumina) (column 1 lines 58-66, column 4 lines 64-67, and and column 6 lines 7-15).

13. With respect to Applicant's step 3 (compressing the mixture to form a structure material), at column 11 lines 64-65, Smith discloses that the particulate composition of his invention can be placed in a porous pouch and **pressed** to a desired shape prior to placement in the substantially gas impermeable and substantially water impermeable membrane enclosure.

14. With regards to Applicant's step 4 (placing the structure material in a gas impermeable envelope), Smith discloses placement of his particulate composition in a substantially gas impermeable and substantially water impermeable membrane enclosure (column 11 lines 64-65).

15. With respect to Applicant's step 5 (evacuating air from the envelope...and sealing the envelope...flat insulating structure), Smith at column 1 lines 25-30, column 13 lines 1-5, and column 12 lines 30-36 discloses said step. Further, Smith and Applicant uses the same process step 5, thus the insulating material of Smith would necessarily be a flat insulating structure.

16. As to Applicant's step 6 (shaping the flat insulating structure...foot of a wearer), it is noted that Garbuio's thermally insulating liner is shaped to fit to a boot and it is shaped to cover the front top portion of a foot of a wearer (see Figure 1 and Figure 2 of Garbuio). Further, Smith discloses that "An insulation body of the present invention may be utilized in any structural shape designed to insulate a system" (column 11 lines 5-10). The Examiner submits that collective disclosure of Garbuio and Smith as set

forth above reasonably conveys to one of ordinary skill in the art to shape the flat insulating structure from a flat structure into a shaped insulating structure as claimed by step 6 of Applicant's method, motivated by the desire to suitably form an insulating structure that can be fitted in a boot in order to insulate the boot.

17. As to Applicant's step 7 (inserting the shaped...cap area of the boot), it is noted that Garbuio's thermally insulating liner is inserted in a boot (see Figure 1).

18. With respect to claimed property of "the shaped insulating structure having a thermal conductivity of less than or equal to...at 25°C", it is reasonable to presume that said property is present in the invention of the insulation bodies of Smith. Because, as set forth previously Smith discloses same structure and composition of shaped insulating structure as that of claimed by Applicant. Thus, the aforementioned property would be present in the invention of Smith.

19. It is noted that the invention of Garbuio is generally related to providing insulating material. Similarly, Smith's invention is also in the field of providing insulation bodies that have improved thermal conductivity values (abstract). Further, Smith discloses that the compositions of his invention can be advantageously utilized as an insulation material to reduce heat transmission in insulation applications which include but are not limited to panels, blankets, walls, housing and the like (column 4 lines 35-45). Further, Smith discloses that the vacuum insulation structure of his invention may have any dimensions depending upon desired end use. According to Smith, the length, width, and the thickness are sufficient to substantially fill the space where it is to be utilized. However, the thickness can be as low as 3 mm (column 12 lines 40-50). Insulation

bodies of Smith having such a low thickness can reasonably be used in the invention of Garbuio as a flexible insert, because Smith's insulation bodies provide excellent insulation.

20. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the insulation bodies of Smith in the invention of Garbuio, motivated by the desire to provide excellent insulation to ski boots of Garbuio.

21. Regarding claims 28 and 29, the insert of Garbuio is between the inner and outer layers of the boot, and it is affixed to an inner boot layer (see Figure 1).

22. Regarding claim 30, for convenience Table 2 as set forth below shows citation of pertinent portions of Garbuio and Smith where the steps of Applicant's claimed invention are disclosed or rendered obvious

Step	Process limitation	Garbuio	Smith
1	Providing a boot having... and a boot sole	abstract and column 1 lines 14-16	
2	Providing a mixture comprising a porous... and aerogel		column 1 lines 56-66, column 4 lines 64-67, and column 6 lines 7-15
3	Compressing the mixture... a structure material		column 11 lines 64-65
4	Placing more than one section of the... in a gas impermeable envelope	general disclosure of Garbuio	column 11 lines 64-65
5	Evacuating air from the envelope... form a flat insulating structure comprising more than one section of		column 1 lines 25-30, column 13 lines 1-5, and column 12 lines 30-35
6	Sealing the envelope between sections of the structure material for shaping	general disclosure of Garbuio	
7	Shaping the flat insulating structure from a flat insulating structure... shaped insulating structure	general disclosure of Garbuio	general disclosure of Smith
8	Inserting the shaped insulating... of the boot	general disclosure of Garbuio	general disclosure of Smith

23. Regarding process steps 1-3, the inventions of Garbuio and Smith are previously disclosed and they are incorporated here by reference.

24. With respect to step 4 (placing more than one section of the structure material in a gas impermeable envelope), it is noted that Figures 4-5 of Garbuio along with the disclosure of Garbuio at column 2 lines 7-25 is interpreted to render claim limitation of step 4 obvious. Specifically, Figures 4-5 of Garbuio discloses the thermally insulating insert having elastomeric foams 4 and 4a [i.e. more than one section] that are placed inside air impermeable envelope formed of thermoplastic layer 6 and fabric layer 3. As set forth previously Smith discloses Applicant's claimed process steps 2 and 3.

25. Therefore, based on the combined disclosure of Garbuio and Smith, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place more than one structure material of Smith in a gas impermeable envelope, motivated by the desire to practice the invention of Garbuio and to provide excellent thermal insulation.

26. Regarding Applicant's step 5, as set forth previously Smith discloses evacuating and sealing of the envelope at reduce pressure to form a flat insulation structure. Garbuio as set forth previously discloses more than one section of insulating structure material within a gas impermeable envelope (abstract and Figures 4-5). Therefore, it would have been obvious to evacuate and seal the envelope at reduce pressure to form a flat insulating structure comprising more than one section of structure material within the envelope, motivated by the desire to provide insulating structure material that has excellent insulation properties.

27. With respect to Applicant's step 6 (sealing the envelope between...flat insulating structure for shaping), it is noted that as shown in Figures 4-5 and at column 2 lines 15-

17 of Garbuio, the envelope between the sections (4 and 4a) of the structure material is sealed at a seam disclosed by numeral 7.

28. With respect to Applicant's method steps 7 and 8, the Examiner incorporates the disclosure of Garbuio and Smith regarding steps 6 and 7 of claim 27 here by reference.

29. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the insulation bodies of Smith in the invention of Garbuio, motivated by the desire to provide excellent insulation to ski boots of Garbuio.

30. Regarding claims 31 and 32, Smith is generally silent as to teaching of loss of thickness, thus it meets claim requirement of loss of thickness of 20% or less and 10% or less at a pressure of 1 atm.

31. With respect to claims 38-41, Smith discloses that the bag (i.e. gas impermeable barrier) is first evacuated to as low a pressure as desired, for example 133.2322-1,333.22 Pa (column 13, lines 1-6). Alternatively, Smith at column 1 lines 40-55 discloses that greater insulating values are achieved at vacuum levels farther beneath ambient. Therefore, it would have been obvious to keep the gas impermeable envelope under a vacuum pressure as claimed, motivated by the desire to achieve greater insulation.

32. Regarding claims 42 and 43, as shown in Figure 1 of Garbuio, the boot of Garbuio includes inner and outer boot layers and the insulating component (i.e. insert) is affixed to the inner boot layer adjacent to a wearer of the boot.

33. Regarding claims 44-47, in absence of unexpected results selecting a suitable thickness of the flat insulating structure would have been obvious, motivated by the desire to use such an insulating structure to insulate a boot.

34. Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garbuio (US 3,925,916) in view of Smith et al. (US 5,877,100) as applied to claim 30 above, and further in view of Bradly (US 4,535,016).

35. It is noted that Garbuio as modified by Smith is silent as to teaching the porous material is fumed silica and fumed alumina.

36. However, Bradly discloses an insulating material for an insulated article such as shoes, hats, tents etc. (abstract and column 1 lines 5-15). Further, the insulting material of Bradly includes silica and alumina particles such as that of disclosed at column 3 lines 5-30, which are interpreted to read on fumed silica and fumed alumina.

37. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select fumed silica (claim 34) or fumed alumina (claim 35), because selection of known material based on its suitability for its intended use supports a *prima facie* case of obviousness.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

38. Claims 27-47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 and 9-34 of copending Application No. 11/106,788. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 27-47 generally encompass same subject matter as that of claimed by claims 1-7 and 9-34 of said copending application.

39. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

40. Applicant's arguments received on 11/24/08 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

41. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.
42. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
43. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./
Examiner, Art Unit 1794

/Hai Vo/
Primary Examiner, Art Unit 1794